

CLAIMS

1. Windshield wiper device (10), in particular for a motor vehicle, comprising at least:
 - one wiper shaft (28) that is provided with a recess (46);
 - a means (32) for partially accommodating the wiper shaft (28), a free end (40) of which protrudes from the accommodating means (32); and
 - an essentially annular locking element (48) that is provided with an interruption (54) along the circumference thereof, is arranged in the recess (46), and is used for at least partially locking the wiper shaft (28) in an axial direction inside the accommodating means (32), characterized in that
 - the locking element (48) has essentially a rectangular structure in cross section; and
 - the recess (46) encompasses at least one slope (56) in the axial direction of the wiper shaft (28), along which the locking element (48) can glide when a predetermined, essentially axial force (F) is applied to the wiper shaft (28).
2. Windshield wiper device (10) according to Claim 1, characterized in that the slope (56) is embodied to be circumferential and has an angle (α) between 25 and 75 degrees with respect to the longitudinal axis of the wiper shaft (28), particularly between 35 and 55, preferably between 40 and 50 degrees.
3. Windshield wiper device (10) according to Claim 2, characterized in that the slope (56) has an angle (α) of approximately 45 degrees.
4. Windshield wiper device (10) according to Claim 1, characterized in that the predetermined force (F) is between 800 and 3000 N, in particular between 1000 and 2000 N, preferably approximately 1500 N.
5. Windshield wiper device (10) according to Claim 4, characterized in that the angle of the slope (56) with respect to the longitudinal axis of the wiper shaft (28) is determined as a function of the force (F).

6. Windshield wiper device (10) according to Claim 1, characterized in that the recess (46) features at least two areas (56, 58) in cross section and namely a first glide area (56) formed by the slope (56) and a second essentially flat or slightly sloped seat area (58) adjacent to the glide area (56).
7. Windshield wiper device (10) according to Claim 6, characterized in that the recess (46) has three areas (56, 58, 60) in cross section and namely a first glide area (56), a second seat area (58) and a third sloped area (60) that is adjacent to the seat area (58) on the side of the accommodating means (32) and is essentially embodied like the glide area (56) so that the recess (46) essentially has a tub-shaped structure in cross section.
8. Windshield wiper device (10) according to Claim 1, characterized in that the locking element (48) is embodied as a stamped part or as a plastic part.
9. Windshield wiper device (10) according to Claim 1, characterized in that the locking element (48) is resting on a stop disk (50).
10. Windshield wiper device (10) according to Claim 9, characterized in that the stop disk (50) is supported on the accommodating means (32).
11. Windshield wiper device (10) according to Claim 2, characterized in that the predetermined force (F) is between 800 and 3000 N, in particular between 1000 and 2000 N, preferably approximately 1500 N.
12. Windshield wiper device (10) according to Claim 3, characterized in that the predetermined force (F) is between 800 and 3000 N, in particular between 1000 and 2000 N, preferably approximately 1500 N.
13. Windshield wiper device (10) according to Claim 5, characterized in that the recess (46) features at least two areas (56, 58) in cross section and namely a first glide area (56) formed by the slope (56) and a second essentially flat or slightly sloped seat area (58) adjacent to the glide area (56).

14. Windshield wiper device (10) according to Claim 13, characterized in that the recess (46) has three areas (56, 58, 60) in cross section and namely a first glide area (56), a second seat area (58) and a third sloped area (60) that is adjacent to the seat area (58) on the side of the accommodating means (32) and is essentially embodied like the glide area (56) so that the recess (46) essentially has a tub-shaped structure in cross section.
15. Windshield wiper device (10) according to Claim 14, characterized in that the locking element (48) is embodied as a stamped part or as a plastic part.
16. Windshield wiper device (10) according to Claim 15, characterized in that the locking element (48) is resting on a stop disk (50).
17. Windshield wiper device (10) according to Claim 16, characterized in that the stop disk (50) is supported on the accommodating means (32).